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MEMORANDUM

TO: Nancy Riveland-Har
Remedial Project Manager
Cleanup Section 4, SFD-7-4

THROUGH: Rose Fong RF
ESAT Project Officer
Quality Assurance (QA) Office, PMD-3

FROM: Doug Lindelof
Data Review and QA Document Review Task Manager
Environmental Services Assistance Team (ESAT)

ESAT Contract No.: 68-W-01-028
Task Order No.: B01
Technical Direction No.: B0105086 Amendment 1

DATE: May 8, 2002

SUBJECT: Review of Analytical Data, Tier 3

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

SITE:	Omega Chem OU-2
SITE ACCOUNT NO.:	09 BC LA02
CERCLIS ID NO.:	CAD042245001
CASE NO.:	11-BCCO-15.0
SDG NO.:	01K017
LABORATORY:	EMAX Laboratories, Inc. (EMAX)
ANALYSIS:	Volatiles
SAMPLES:	10 Water Samples
COLLECTION DATE:	November 1, 2001
REVIEWER:	Denise McCaffrey, ESAT/LDC

The comments and qualifications presented in this report have been reviewed by the EPA Task Order Project Officer (TOPO) for the ESAT Contract, whose signature appears above.

If there are any questions, please contact Rose Fong (QA Program/EPA) at (415) 972-3812.

Attachment

cc: ESAT File

SAMPLING ISSUES: [X] Yes [ ] No

Data Validation Report

Case No.: 11-BCCO-15.0 SDG No.: 01K017
Site: Omega Chem OU-2
Laboratory: EMAX Laboratories, Inc.
Reviewer: Denise McCaffrey, ESAT/LDC
Date: May 8, 2002

I. Case Summary

SAMPLE INFORMATION:

Samples:	GW401-PP076-0056, GW401-PP077-0060, GW401-PP078-0081, GW401-PP079-0088, GW401-PP079-1088, GW401-PP081-4006, GW401-PP081-0071, GW401-PP080-0071, GW401-PP0812-2006, and GW401-PP082-0080
Concentration and Matrix:	Low Level Water
Analysis:	Volatiles
SOW:	SW-846 Method 8260B
Collection Date:	November 1, 2001
Sample Receipt Date:	November 2, 2001
Extraction Date:	Not Applicable
Analysis Date:	November 3 and 4, 2001

FIELD QC:

Trip Blanks (TB):	GW401-PP082-2006
Field Blanks (FB):	Not Provided
Equipment Blanks (EB):	GW401-PP081-4006
Background Samples (BG):	Not Provided
Field Duplicates (D1):	GW401-PP079-0088 and GW401-PP079-1088

METHOD BLANKS AND ASSOCIATED SAMPLES:

MBLK1W:	GW401-PP076-0056, GW401-PP077-0060, GW401-PP078-0081, GW401-PP079-0088, GW401-PP079-1088, GW401-PP080-0071, and GW401-0082-2006
MBLK2W:	GW401-PP078-0081DL, GW401-PP078-0081DL2, GW401-PP079-0088DL, GW401-PP081-0071, GW401-PP082-0080
MBLK3W:	GW401-PP079-1088DL and GW401-PP081-4006

TABLES:

1A: Analytical Results with Qualifications
1B: Data Qualifier Definitions for Organic Data Review

DL - Dilution

SAMPLING ISSUES:

Detected results for chloroform are qualified as nondetected and estimated (U,J) due to contamination in equipment blank GW401-PP081-4006 and trip blank GW401-PP082-2006.

Although tetrachloroethene was detected at a concentration of 0.21 μg/L in trip blank GW401-PP082-2006, no data are qualified because tetrachloroethene was either not detected in the associated samples or was detected at more than 5 times the amount in the trip blank.

Matrix spike/matrix spike duplicate (MS/MSD) analysis was not performed because no MS/MSD sample was designated in this sample delivery group (SDG).

ADDITIONAL COMMENTS:

Dichlorofluoromethane was not analyzed. This compound is included in the REAP DQI Table.

The REAP DQI Table specifies that four surrogate spikes (Toluene-d8, BFB, 1,2-dichloroethane-d4, and dibromofluoromethane) are required. Only three surrogate spikes (Toluene-d8, BFB, and 1,2-dichloroethane-d4) were used by the laboratory. The accuracy of the analyses were assessed based on the same grouping of surrogates and internal standards used by the laboratory.

Tentatively identified compounds (TICs) were not reported by the laboratory.

This report was prepared in accordance with the following documents:

- ESAT Region 9 Data Quality Indicator (DQI) Table for *Volatile Organic Compounds (VOCs) by SW-846 Method 8260,* Appendix B, Attachment 2, Section J, Contract No. 68-R9-00-11, Regional Environmental Analytical Procurement (REAP);
- EPA SW-846 Method 8260B, *Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS),* Revision 2, December 1996;
- ESAT Region 9 Standard Operating Procedure 901, *Guidelines for Data Review of Contract Laboratory Program Analytical Services (CLPAS) Volatile and Semivolatile Data Packages*; and
- *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

II. Validation Summary

	Acceptable/Comment	
HOLDING TIMES	YES	
GC/MS TUNE/GC PERFORMANCE	YES	
INITIAL CALIBRATIONS	YES	
CONTINUING CALIBRATIONS	NO	C, D
LABORATORY BLANKS	YES	
FIELD BLANKS	NO	B
SURROGATES	NO	E
LABORATORY CONTROL SAMPLE/DUPLICATE	YES	
MATRIX SPIKE/DUPLICATE	N/A	
INTERNAL STANDARDS	YES	
COMPOUND IDENTIFICATION	NO	H
COMPOUND QUANTITATION	YES	A, G
SYSTEM PERFORMANCE	YES	
FIELD DUPLICATE SAMPLE ANALYSIS	NO	F

N/A = Not Applicable

III. Validity and Comments

A. The following results, denoted with an "L" qualifier, are estimated and flagged "J" in Table 1A.

- All results below the contract required quantitation limits

Results below the contract required quantitation limits (CRQLs) are considered to be qualitatively acceptable, but quantitatively unreliable, due to the uncertainty in analytical precision near the limit of detection.

B. The following results are qualified as nondetected and estimated due to method blank and field blank contamination, and are flagged "U,J" in Table 1A.

- Chloroform in samples GW401-PP076-0056, GW401-PP077-0060, GW401-PP078-0081, GW401-PP079-0088, and GW401-PP079-1088

Chloroform was found in equipment blank GW401-PP081-4006 and trip blank GW401-PP082-2006 at concentrations of 0.53 μg/L and 0.64 μg/L, respectively. Results for the samples listed above are considered nondetected and estimated (U,J) and the quantitation limits have been increased according to the blank qualification rules presented below.

No positive results are reported unless the concentration of the compound in the sample exceeds 10 times the amount in any associated blank for the common laboratory contaminants or 5 times the amount for other compounds. If the sample result is greater than the CRQL, the quantitation limit is raised to the sample result (U,J). If the sample result is less than the CRQL, the result is reported as nondetected (U,J) at the CRQL.

A trip blank is laboratory reagent water which is shipped from the laboratory to the field with the empty sample containers and back to the laboratory with the filled sample containers. A trip blank is intended to detect contaminants introduced during the transport of the samples to the laboratory, although any laboratory introduced contamination will be present. Contaminants that are found in the trip blank which are absent in the laboratory blank could be indicative of a problem in transportation, storage, the bottle preparation procedure, or other indeterminate error.

An equipment blank is clean water that has been collected as a sample using decontaminated sampling equipment. The intent of an equipment blank is to monitor for contamination introduced by the sampling activity, although any laboratory introduced contamination will also be present.

C. Detected results and quantitation limits for the following analytes are qualified as estimated due to low relative response factors (RRFs) in the continuing calibration, and are flagged "J" in Table 1A.

- Acetone in sample GW401-PP081-4006 and method blank MBLK3W

An average RRF of 0.048 was observed for acetone in the continuing calibration performed on November 4, 2001. This value is below the 0.05 validation criterion.

Detected results for the analyte listed above should be considered as the minimum values at which this analyte is present in the samples. Where the results are nondetected, false negatives may exist.

The relative response factor evaluates instrument sensitivity.

D. Detected results and quantitation limits for the following analytes are qualified as estimated due to a large percent difference (%D) in the continuing calibration, and are flagged "J" in Table 1A.

- Acetone in samples GW401-PP076-0056, GW401-PP077-0060, GW401-PP078-0081, GW401-PP079-0088, GW401-PP079-1088, GW401-PP080-0071, GW401-PP082-2006, and method blank MBLK1W

- Hexachlorobutadiene in all samples and method blanks

A %D of 31.4% (biased high) was observed for acetone in the continuing calibration performed on November 2, 2001. %Ds of 31.4%, 38.5%, and 33.8% (biased low) were observed for hexachlorobutadiene in the continuing calibrations performed on November 2, 3, and 4, 2001, respectively. These values exceed the ±30.0% validation criterion.

The continuing calibration checks the instrument's performance daily.

E. Detected results and quantitation limits for the following analytes are qualified as estimated due to surrogate recovery outside QC limits, and are flagged "J" in Table 1A.

{1,2-Dichloroethane-d4}
- 1,1-Dichloroethene, trichlorofluoromethane, and freon 113 in samples GW401-PP077-0060, GW401-PP078-0081, GW401-PP079-0088, and GW401-PP079-1088
- cis-1,2-Dichloroethene in samples GW401-PP077-0060 and GW401-PP078-0081
- Chloroform in sample GW401-PP082-2006

Surrogate recoveries exceeded the QC limits are shown below for the samples listed above.

Sample	Surrogate	% Recovery	QC Limits
GW401-PP077-0060	1,2-Dichloroethane-d4	119	85-115
GW401-PP078-0081	1,2-Dichloroethane-d4	119	85-115
GW401-PP078-0081DL2	1,2-Dichloroethane-d4	121	85-115
GW401-PP079-0088	1,2-Dichloroethane-d4	119	85-115
GW401-PP082-4006	1,2-Dichloroethane-d4	123	85-115

Detected results for affected analytes may be biased high. The samples were not re-analyzed.

Surrogates are organic compounds which are similar to the target analytes in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples. All samples are spiked with surrogates prior to purging. Surrogates provide information about both the laboratory performance on individual samples and the possible effects of the sample matrix on the analytical results.

F. In the analysis of the field duplicate pairs, the following outliers were obtained for the analytes listed below.

	GW401-PP079-0088 (D1)	GW401-PP079-1088 (D1)	
Analyte	Conc., µg/L	Conc., µg/L	RPD (<25%)
1,1-Dichloroethene	4.3	12	94
Benzene	0.24L	1U	N/A
Trichlorofluoromethane	0.66L	0.25L	N/A
Acetone	7.5L	3L	N/A
Trichloroethene	240	580	83
Tetrachloroethene	8.8	6.1	36
Freon 113	2.9	1.8	47
Methylene chloride	0.21L	1U	N/A

A relative percent difference (RPD) value is not calculated and is presented above as "N/A" when an analyte is detected in a sample but is either below the CRQL or is nondetected (U) at the CRQL in the associated field duplicate sample, or when an analyte is detected below the CRQL in both field duplicate samples. The effect on data quality is not known.

RPDs of 94%, 83%, 36%, and 47% were obtained for 1,1-dichloroethene, trichloroethene, tetrachloroethene, and freon 113, respectively, in the analysis of field duplicate samples GW401-PP079-0088 and GW401-PP079-1088. The effect on data quality is not known.

The analysis of field duplicate samples is a measure of both field and analytical precision. The imprecision in the results of the analysis of the field duplicate pair may be due to the sample matrix or poor sampling or analysis technique.

G. Sample GW401-PP078-0081was analyzed at a 10-fold dilution due to the high levels of 1,1-dichloroethene, trichlorofluoromethane, acetone, and trichloroethene. A further dilution of 500-fold was analyzed due to the high levels of tetrachloroethene and freon 113. Results for 1,1-dichloroethene, trichlorofluoromethane, acetone, trichloroethene, tetrachloroethene, and freon 113 are reported from the diluted samples in Table 1A; results for all other analytes are reported from the undiluted sample.

Sample GW401-PP079-0088 was analyzed at a 10-fold dilution due to the high level of trichloroethene. The result for trichloroethene is reported from the diluted sample in Table 1A; results for all other analytes are reported from the undiluted sample.

Sample GW401-PP079-1088 was analyzed at a 25-fold dilution due to the high level of trichloroethene. The result for trichloroethene is reported from the diluted sample in Table 1A; results for all other analytes are reported from the undiluted sample.

H. Acetone was detected in the sample GW401-PP078-0081 at a concentration of 130 μg/L. However, the presence of acetone cannot be verified by the data reviewer because of the high concentration of freon 113 (1000 μg/L) in the sample.

ANALYTICAL RESULTS
Tier 3 Table 1A

Case No. : 11-BCCO-15.0 SDG No. : 01K017
Site : Omega Chem OU-2
Lab : EMAX
Reviewer : Denise McCaffrey, ESAT/LDC
Date : May 8, 2002

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Water Samples for Volatiles by EPA Method 8260B

Station Description :																					
Sample ID :	GW401-PP076-0056			GW401-PP077-0060			GW401-PP078-0081			GW401-PP079-0088 D1			GW401-PP079-1088 D1			GW401-PP081-4006 EB			GW401-PP081-0071		
Collection Date :	11/01/01			11/01/01			11/01/01			11/01/01			11/01/01			11/01/01			11/01/01		
Dilution Factor :	1			1			1			1			1			1			1		
Volatile Compound	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
1,1-Dichloroethane	1U			1U			1U			1U			1U			1U			1U		
1,1-Dichloroethene	1U			0.21L	J	AE	120	J	EG	4.3	J	EF	12	J	EF	1U			1U		
1,1-Dichloropropene	1U			1U			1U			1U			1U			1U			1U		
1,2,3-Trichloropropane	1U			1U			1U			1U			1U			1U			1U		
1,2,4-Trimethylbenzene	1U			1U			1U			1U			1U			1U			1U		
1,2-Dibromo-3-chloropropane	2U			2U			2U			2U			2U			2U			2U		
1,2-Dichlorobenzene	1U			1U			1U			1U			1U			1U			1U		
1,2-Dichloroethane	0.5U			0.5U			0.5U			0.5U			0.5U			0.5U			0.5U		
1,2-Dichloropropane	1U			1U			1U			1U			1U			1U			1U		
1,2-Dibromoethane	1U			1U			1U			1U			1U			1U			1U		
1,3,5-Trimethylbenzene	1U			1U			1U			1U			1U			1U			1U		
1,3-Dichlorobenzene	1U			1U			1U			1U			1U			1U			1U		
1,3-Dichloropropane	1U			1U			1U			1U			1U			1U			1U		
1,4-Dichlorobenzene	1U			1U			1U			1U			1U			1U			1U		
2,2-Dichloropropane	1U			1U			1U			1U			1U			1U			1U		
2-Chlorotoluene	1U			1U			1U			1U			1U			1U			1U		
Benzene	1U			1U			0.75L	J	A	0.24L	J	AF	1U		F	1U			1U		
Bromobenzene	1U			1U			1U			1U			1U			1U			1U		
Bromochloromethane	1U			1U			1U			1U			1U			1U			1U		
Bromodichloromethane	1U			1U			1U			1U			1U			1U			1U		
Bromoform	1U			1U			1U			1U			1U			1U			1U		
Bromomethane	1U			1U			1U			1U			1U			1U			1U		
Carbon Tetrachloride	0.5U			0.26L	J	A	0.5U			0.5U			0.5U			0.5U			0.5U		
Chlorobenzene	1U			1U			1U			1U			1U			1U			1U		
Chloroethane	1U			1U			1U			1U			1U			1U			1U		
Chloroform	1U	J	B	1U	J	B	1.5U	J	B	1U	J	B	1U	J	B	0.53L	J	A	1U		
Chloromethane	1U			1U			1U			1U			1U			1U			1U		
cis-1,2-Dichloroethene	0.84L	J	A	0.88L	J	AE	1.6	J	E	1U			1U			1U			1U		
Dibromomethane	1U			1U			1U			1U			1U			1U			1U		
Dichlorodifluoromethane	1U			1U			1U			1U			1U			1U			1U		
m/p-Xylenes	1U			1U			1U			1U			1U			1U			1U		
n-Butylbenzene	1U			1U			1U			1U			1U			1U			1U		
o-Xylene	1U			1U			1U			1U			1U			1U			1U		
sec-Butylbenzene	1U			1U			1U			1U			1U			1U			1U		
tert-Butylbenzene	1U			1U			1U			1U			1U			1U			1U		
trans-1,2-Dichloroethene	1U			1U			1U			1U			1U			1U			1U		

ANALYTICAL RESULTS
Tier 3 Table 1A

Case No. : 11-BCCO-15.0 SDG No. : 01K017
Site : Omega Chem OU-2
Lab : EMAX
Reviewer : Denise McCaffrey, ESAT/LDC
Date : May 8, 2002

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Water Samples for Volatiles by EPA Method 8260B

Station Description :																					
Sample ID :	GW401-PP076-0056			GW401-PP077-0060			GW401-PP078-0081			GW401-PP079-0088 D1			GW401-PP079-1088 D1			GW401-PP081-4006 EB			GW401-PP081-0071		
Collection Date :	11/01/01			11/01/01			11/01/01			11/01/01			11/01/01			11/01/01			11/01/01		
Dilution Factor :	1			1			1			1			1			1			1		
Volatile Compound	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Trichlorofluoromethane	1U			0.48L	J	AE	310	J	EG	0.66L	J	AEF	0.25L	J	AEF	1U			1U		
Vinyl Chloride	2U			2U			2U			2U			2U			2U			2U		
Acetone	10U	J	D	10U	J	D	130	J	DGH	7.5L	J	ADF	3L	J	ADF	10U	J	C	10U	J	D
2-Butanone	10U			10U			10U			10U			10U			10U			10U		
Carbon Disulfide	1U			1U			1U			1U			1U			1U			1U		
Toluene	1U			1U			1U			1U			1U			1U			1U		
Trichloroethene	11			16			240		G	240		FG	580		FG	1U			1U		
Chlorodibromomethane	1U			1U			1U			1U			1U			1U			1U		
4-Chlorotoluene	1U			1U			1U			1U			1U			1U			1U		
Tetrachloroethene	32			34			2300		G	8.8		F	6.1		F	1U			22		
Freon 113	1.2			2.6	J	E	1000	J	EG	2.9	J	EF	1.8	J	EF	1U			1U		
Ethylbenzene	1U			1U			1U			1U			1U			1U			1U		
Hexachlorobutadiene	1U	J	D	1U	J	D	1U	J	D	1U	J	D	1U	J	D	1U	J	D	1U	J	D
Isopropylbenzene	1U			1U			1U			1U			1U			1U			1U		
p-Isopropyltoluene	1U			1U			1U			1U			1U			1U			1U		
Methylene Chloride	1U			1U			1U			0.21L	J	AF	1U		F	1U			1U		
Napthalene	1U			1U			1U			1U			1U			1U			1U		
n-Propylbenzene	1U			1U			1U			1U			1U			1U			1U		
Styrene	1U			1U			1U			1U			1U			1U			1U		
1,1,1,2-Tetrachloroethane	1U			1U			1U			1U			1U			1U			1U		
1,1,2,2-Tetrachloroethane	1U			1U			1U			1U			1U			1U			1U		
1,2,4-Trichlorobenzene	1U			1U			1U			1U			1U			1U			1U		
1,2,3-Trichlorobenzene	1U			1U			1U			1U			1U			1U			1U		
1,1,1-Trichloroethane	1U			1U			0.56L	J	A	1U			1U			1U			1U		
1,1,2-Trichloroethane	1U			1U			1U			1U			1U			1U			1U		
Methyl t-butyl ether	1U			1U			1U			1U			1U			1U			1		
Dichlorofluoromethane	NA			NA			NA			NA			NA			NA			NA		

Val - Validity. Refer to Data Qualifiers in Table 1B.
Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.
CRQL - Contract Required Quantitation Limit, N/A - Not Applicable, NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs
FB - Field Blank, EB - Equipment Blank, TB - Trip Blank, BG - Background Sample

ANALYTICAL RESULTS
Tier 3 Table 1A

Case No. : 11-BCCO-15.0 SDG No. : 01K017
Site : Omega Chem OU-2
Lab : EMAX
Reviewer : Denise McCaffrey, ESAT/LDC
Date : May 8, 2002

QUALIFIED DATA
Concentration in ug/L

Analysis Type : Water Samples for Volatiles by EPA Method 8260B

Station Description :																				
Sample ID :	GW401-PP080-0071			GW401-PP082-2006 TB			GW401-PP082-0080			Method Blank MBLK1W			Method Blank MBLK2W			Method Blank MBLK3W			CRQL		
Collection Date :	11/01/01			11/01/01			11/01/01														
Dilution Factor :	1			1			1			1			1			1					
Volatile Compound	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
1,1-Dichloroethane	1U			1U			1U			1U			1U			1U			1		
1,1-Dichloroethene	1U			1U			1U			1U			1U			1U			1		
1,1-Dichloropropene	1U			1U			1U			1U			1U			1U			1		
1,2,3-Trichloropropane	1U			1U			1U			1U			1U			1U			1		
1,2,4-Trimethylbenzene	1U			1U			1U			1U			1U			1U			1		
1,2-Dibromo-3-chloropropane	2U			2U			2U			2U			2U			2U			2		
1,2-Dichlorobenzene	1U			1U			1U			1U			1U			1U			1		
1,2-Dichloroethane	0.5U			0.5U			0.5U			0.5U			0.5U			0.5U			0.5		
1,2-Dichloropropane	1U			1U			1U			1U			1U			1U			1		
1,2-Dibromoethane	1U			1U			1U			1U			1U			1U			1		
1,3,5-Trimethylbenzene	1U			1U			1U			1U			1U			1U			1		
1,3-Dichlorobenzene	1U			1U			1U			1U			1U			1U			1		
1,3-Dichloropropane	1U			1U			1U			1U			1U			1U			1		
1,4-Dichlorobenzene	1U			1U			1U			1U			1U			1U			1		
2,2-Dichloropropane	1U			1U			1U			1U			1U			1U			1		
2-Chlorotoluene	1U			1U			1U			1U			1U			1U			1		
Benzene	1U			1U			0.44L	J	A	1U			1U			1U			1		
Bromobenzene	1U			1U			1U			1U			1U			1U			1		
Bromochloromethane	1U			1U			1U			1U			1U			1U			1		
Bromodichloromethane	1U			1U			1U			1U			1U			1U			1		
Bromoform	1U			1U			1U			1U			1U			1U			1		
Bromomethane	1U			1U			1U			1U			1U			1U			1		
Carbon Tetrachloride	0.5U			0.5U			0.5U			0.5U			0.5U			0.5U			0.5		
Chlorobenzene	1U			1U			1U			1U			1U			1U			1		
Chloroethane	1U			1U			1U			1U			1U			1U			1		
Chloroform	1U			0.64L	J	AE	1U			1U			1U			1U			1		
Chloromethane	1U			1U			1U			1U			1U			1U			1		
cis-1,2-Dichloroethene	1U			1U			1U			1U			1U			1U			1		
Dibromomethane	1U			1U			1U			1U			1U			1U			1		
Dichlorodifluoromethane	1U			1U			1U			1U			1U			1U			1		
m/p-Xylenes	1U			1U			1U			1U			1U			1U			1		
n-Butylbenzene	1U			1U			1U			1U			1U			1U			1		
o-Xylene	1U			1U			1U			1U			1U			1U			1		
sec-Butylbenzene	1U			1U			1U			1U			1U			1U			1		
tert-Butylbenzene	1U			1U			1U			1U			1U			1U			1		
trans-1,2-Dichloroethene	1U			1U			1U			1U			1U			1U			1		

ANALYTICAL RESULTS
Tier 3 Table 1A

Case No.: 11-BCCO-15.0 SDG No.: 01K017
Site: Omega Chem OU-2
Lab: EMAX
Reviewer: Denise McCaffrey, ESAT/LDC
Date: May 8, 2002

QUALIFIED DATA
Concentration in ug/L

Analysis Type: Water Samples for Volatiles by EPA Method 8260B

Station Description:																				
Sample ID:	GW401-PP080-0071			GW401-PP082-2006 TB			GW401-PP082-0080			Method Blank MBLK1W			Method Blank MBLK2W			Method Blank MBLK3W			CRQL		
Collection Date:	11/01/01			11/01/01			11/01/01														
Dilution Factor:	1			1			1			1			1			1					
Volatile Compound	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Trichlorofluoromethane	1U			1U			1U			1U			1U			1U			1		
Vinyl Chloride	2U			2U			2U			2U			2U			2U			2		
Acetone	10U	J	D	10U	J	D	6.9L	J	A	10U	J	D	10U			10U	J	C	10		
2-Butanone	10U			10U			3L	J	A	10U			10U			10U			10		
Carbon Disulfide	1U			1U			1U			1U			1U			1U			1		
Toluene	1U			1U			0.44L	J	A	1U			1U			1U			1		
Trichloroethene	1U			1U			1U			1U			1U			1U			1		
Chlorodibromomethane	1U			1U			1U			1U			1U			1U			1		
4-Chlorotoluene	1U			1U			1U			1U			1U			1U			1		
Tetrachloroethene	5.1			0.21L	J	A	2.8			1U			1U			1U			1		
Freon 113	1U			1U			1U			1U			1U			1U			1		
Ethylbenzene	1U			1U			1U			1U			1U			1U			1		
Hexachlorobutadiene	1U	J	D	1U	J	D	1U	J	D	1U	J	D	1U	J	D	1U	J	D	1		
Isopropylbenzene	1U			1U			1U			1U			1U			1U			1		
p-Isopropyltoluene	1U			1U			1U			1U			1U			1U			1		
Methylene Chloride	1U			1U			1U			1U			1U			1U			1		
Napthalene	1U			1U			1U			1U			1U			1U			1		
n-Propylbenzene	1U			1U			1U			1U			1U			1U			1		
Styrene	1U			1U			1U			1U			1U			1U			1		
1,1,1,2-Tetrachloroethane	1U			1U			1U			1U			1U			1U			1		
1,1,2,2-Tetrachloroethane	1U			1U			1U			1U			1U			1U			1		
1,2,4-Trichlorobenzene	1U			1U			1U			1U			1U			1U			1		
1,2,3-Trichlorobenzene	1U			1U			1U			1U			1U			1U			1		
1,1,1-Trichloroethane	1U			1U			1U			1U			1U			1U			1		
1,1,2-Trichloroethane	1U			1U			1U			1U			1U			1U			1		
Methyl t-butyl ether	1U			1U			1U			1U			1U			1U			1		
Dichlorofluoromethane	NA			NA			NA			NA			NA			NA			NA		

Val - Validity. Refer to Data Qualifiers in Table 1B.
Com - Comments. Refer to the Corresponding Section in the Narrative for each letter.
CRQL - Contract Required Quantitation Limit, N/A - Not Applicable, NA - Not Analyzed

D1, D2, etc. - Field Duplicate Pairs
FB - Field Blank, EB - Equipment Blank, TB - Trip Blank, BG - Background Sample

TABLE 1B

DATA QUALIFIER DEFINITIONS FOR ORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared according to the document, "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," February 1994.

U	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
L	Indicates results which fall below the Contract Required Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.